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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YEH, EDITH M

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/436,522

Applicant(s)

SHA ET AL.

Examiner

Edith M Yeh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 9, 13-15, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 3, 6-8, 10-12, 16-17, 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-5, 13-14, & 18-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Hardin (U.S. Patent 5631920).

Regarding claims 1, & 13-14, Hardin discloses a method and an apparatus (FIG.7) comprising: a first circuit (50-60 FIG.7) to generate a clock signal (68 FIG.7) in response to (i) a reference signal (50 FIG.7, column 7 lines 33-37), (ii) a sequence of spread spectrum ROM codes (56 FIG.7, column 7 lines 16-21), and (iii) a command signal (54 FIG.7, column 7 lines 37-38); and a second circuit (52-70 FIG.7) to synchronize the command signal (54, 52, 58 FIG.7, column 7 lines 45-52 where the command signal can change the ROM code provided to the feedback signal) to a feedback signal (68, 70, 62 FIG.7, column 7 lines 53-56 & lines 63-67), wherein the sequence of spread spectrum ROM code is predetermined mathematical formula (column 4, lines 39-44, column 5 lines 12-column 6 line 20) and optimized in accordance with predetermined criteria (column 4 lines 44-46, lines 49-52).

Regarding claim 2, Hardin discloses a spread spectrum clock generator circuit (FIG.7) wherein the clock signal is spread spectrum modulated (68 FIG.7).

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Regarding claim 4, Hardin discloses the apparatus is used with a motherboard or CPU (column 2 lines 59-63).

Regarding claims 5 & 19, Hardin discloses a circuit to generate one or more control signals (64 & 58 FIG.8, column 8 lines 51-58) in response to (i) the command signal (54 FIG.8), and (ii) the feedback signal (68 FIG.8) to synchronize the command signal to the feedback signal.

Regarding claim 18, Hardin discloses controlling a feedback divider (52 FIG.8 Hardin) with the sequence of spread spectrum ROM codes (56 FIG.8 Hardin).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardin (U.S. Patent 5631920) in view of Sha (U.S. Patent 6377646).

Regarding claim 9, Hardin does teach the predetermined upper and lower bounds of the period, however does not specify the predetermined minimum and maximum frequencies as criteria to optimize the spread spectrum ROM codes. Sha teaches the criteria (column 2 lines 32-36). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to have the frequency criteria taught by Sha in Harding's Spread Spectrum Clock Generator to have frequency bound to reduce EMI (column 1 lines 14-18).

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5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardin (U.S. Patent 5631920) in view of Hardin et al. (U.S. Patent 5488627).

Hardin discloses steps of selecting a number of ROM codes according to predetermined mathematical formula to generate a spread spectrum modulation signal (column 5 lines 9-14, column 5 lines 22-37 Hardin), however does not list the TABLE 1 of the application Ser. No. 160070 (U.S. Patent 5631920) of which U.S. Patent 5631920 is a continuation-in-part. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the TABLE (columns 5 & 6 TABLE 1) taught by Hardin et al. to the Hardin's selecting step to carry out the method in this claim.

Allowable Subject Matter

6. Claims 3, 6-8, 10-~~12~~, 16-17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Yeh whose telephone number is 7033053416. The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 7033054714. The fax phone numbers for the

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organization where this application or proceeding is assigned are 7038729314 for regular communications and 7038729314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 7033054800.

Edith Yeh
January 16, 2003



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600